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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/911,663	07/24/2001	John Edward Ciolfi	04899-060001	3836

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EXAMINER	
PILLAI, NAMITHA	
ART UNIT	**PAPER NUMBER**
2173	

DATE MAILED: 02/10/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/911,663	CIOLFI, JOHN EDWARD	
	Examiner	Art Unit	
	Namitha Pillai	2173	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *15 November 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *16-46* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *16-46* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *11 March 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Response to Appeal Brief

1. The Examiner acknowledges Applicant's submission on 11/15/05 of an Appeal Brief. Based on the arguments with reference to a block method inversely mapping parameters, it has been determined that the combination of U. S. Patent No. 5, 481, 741 (McKaskle et al.), herein referred to as McKaskle and U. S. Patent No. 6, 754, 885 B1 (Dardinski et al.), herein referred to as Darkinski do not teach a block method that inversely maps parameters. Therefore, prosecution has been reopened. Claims 16-46 have been rejected over U. S. Patent No. 6, 937, 257 B1 (Dunlavey), which teaches a block diagram-modeling environment that uses user-defined parameters producing run-time block parameters.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 16-46 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. These claims contain the indefinite term "optimally", wherein the term is subjective, failing to provide an objective way to determine the "optimal" run-time block parameter and therefore is indefinite.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 16-46 are rejected under 35 U.S.C. 102(e) as being clearly anticipated by Dunlavey.

As per claims 16 (method) and 45 (readable medium), Dunlavey discloses a method of mapping graphical block diagram block parameters in a graphical block diagram modeling environment (see col. 9, lines 55-60), where these variables are mapped into graphical block diagram for functions represented by the blocks of the diagram. Dunlavey discloses receiving a user-defined block parameter (see col. 9, lines 55-60) where the graphical block functions receive the parameters that are defined by the user. Dunlavey discloses processing the user-defined block parameter to optimally produce a run-time block parameter for use during modeling (column 3, lines 1-8), with the parameters defined for the blocks by the user is optimized with its proper unit data to create an internal representation of the user defined block parameter, creating the run-time block parameter for modeling the graphical block diagram.

As per claims 33 (method) and 46 (readable medium), Dunlavey discloses the inventions substantially as claimed above. Dunlavey discloses the limitations of receiving a plurality of user-defined block parameters (column 9, lines 55-67), teaching that Dunlavey allows for multiple variables to be defined by the user. Dunlavey also discloses processing the plurality of user-defined block parameter to optimally produce a plurality of run-time block parameters (column 3, lines 1-8), with the parameters

defined for the blocks by the user is optimized with its proper unit data to create an internal representation of the user defined block parameter, creating the run-time block parameter for modeling the graphical block diagram. All parameters that are defined by the user for all components of the graphical block diagram have a representative run-time optimized parameter that is created when the internal representation of the graphical block diagram is generated. Dunlavey also teaches the grouping or pooling together of like non-interfaced run-time block parameters to create a run-time parameter expression for use during modeling, wherein Figure 4 lists the expression "SetDiscrete" which includes a group of run-time block parameters that are grouped and share a commonality of belonging to this group. Figure 4 is further taught to represent run-time parameters and expressions as it is an internal representation (column 17, lines 63-65).

As per claim 17, Dunlavey discloses a block method that inversely links or maps the block run-time parameter to the user-defined block parameter to optimize block implementation (column 9, lines 7-12), where the functions teach inverse linking of the run-time parameter to the user-defined parameter.

As per claim 18, Dunlavey discloses the limitations of receiving a plurality of user-defined block parameters (column 9, lines 55-67), teaching that Dunlavey allows for multiple variables to be defined by the user.

As per claim 19, Dunlavey also discloses processing the plurality of user-defined block parameter to optimally produce a run-time block parameter (column 3, lines 1-8), with the parameters defined for the blocks by the user is optimized with its proper unit

data to create an internal representation of the user defined block parameter, creating the run-time block parameter for modeling the graphical block diagram.

As per claim 20, Dunlavey also discloses processing the plurality of user-defined block parameter to optimally produce a single run-time block parameters (column 3, lines 1-8), with the parameters defined for the blocks by the user is optimized with its proper unit data to create an internal representation of the user defined block parameter, creating the run-time block parameter for modeling the graphical block diagram.

As per claims 21, 27 and 39, Dunlavey discloses that the run-time block parameter is configured to return simulations results and automatically generated code that implements graphical block diagram model equations (column 19, lines 25-65).

As per claim 22, Dunlavey discloses mapping by discarding at least a portion of the plurality of user-defined block parameters to reduce memory requirements (column 22, lines 45-55), where Dunlavey teaches only regarding distinct parameters within a set of parameters, and thereby discarding at least a portion of the parameters, and wherein the simulation requiring memory is reduced where the simulation only occurs for the certain parameters that are not discarded.

As per claim 23, Dunlavey also teaches the grouping or pooling together of like non-interfaced run-time block parameters to create a run-time parameter expression for use during modeling, wherein Figure 4 lists the expression "SetDiscrete" which includes a group of run-time block parameters that are grouped and share a commonality of belonging to this group. Figure 4 is further taught to represent run-time parameters and

expressions as it is an internal representation (column 17, lines 63-65). The reference to "SetDiscrete" allows for referencing a set of parameters, which would reduce repetition of all variables contained within that category or set.

As per claims 24 and 34, Dunlavey discloses mapping user defined block parameters into an existing pool (column 7, lines 55-67), where user-defined parameters are received and considered part of an existing pool to be evaluated on a periodic basis.

As per claim 25, Dunlavey discloses repeating the pooling step with additional optimization (column 8, lines 1-4).

As per claim 26, Dunlavey discloses mapping by translating the plurality of user-defined block parameters based at least in part on type (column 11, lines 10-16).

As per claims 28 and 40, Dunlavey discloses that the code is automatically generated, the parameter expressions are maintained in the automatically generated code (column 19, lines 42-55).

As per claims 29 and 41, Dunlavey discloses that the parameter expressions contain interfaced variables that are updatable during modeling (column 25, lines 40-47).

As per claims 30 and 42, Dunlavey discloses converting to a relatively more compact representation portions of the parameter expressions that are constants while providing access to interface variables that are updatable (column 10, lines 45-50 and column 25, lines 40-50), where assignment expressions teaching assigning of a

constant value to a variable and differential equation allows for manipulation of values with changes reflected in the graphs as the user updates the parameters.

As per claims 31 and 43, Dunlavey discloses that interfaced variables are updatable (column 25, lines 40-50).

As per claims 32 and 44, Dunlavey discloses that the updatable variables used in a plurality of blocks are declared only once (column 19, lines 57-64), wherein teaching the use of global variables which are variables that are declared once and is used in a plurality of blocks or functions.

As per claim 35, Dunlavey discloses that the non-interfaced run-time block parameters have stored values that differ from presented values (see col. 3, lines 1-7), where a conversion process occurs from the presented value to the run-time parameters.

As per claim 36, Dunlavey discloses that the non-interfaced run-time block parameters are fixed point, where Figure 4 teaches "NamedConst" which is a representation of a run-time block parameter that is fixed point.

As per claim 37, Dunlavey discloses translating at run-time constant parameter values to an internal representation to enable increased pooling, where Figure 4 teaches a translated run-time parameter value that is an internal representation of "Unit" which is used multiple times as needed for using units, thereby enabling increased pooling (column 16, lines 38-45).

As per claim 38, Dunlavey discloses collecting constant portions of an expression

containing an interfaced variable (column 24, lines 35-45), wherein discloses collecting the constant portions of an expression, as previous expressions that are calculated to a constant value and this constant value further used in an expression containing an interfaced variable, thereby teaching collecting the constant portions of an expression.

Response to Arguments

4. Applicant's arguments filed 11/15/05 have been fully considered but are moot in view of the new ground(s) of rejection.

Conclusion

5. The prior art made of record on form PTO-892 and not relied upon is considered pertinent to applicant's disclosure. Applicant is required under 37 C.F.R. § 1.111(c) to consider these references fully when responding to this action. The documents cited therein teach the method for displaying graphical model data.

Responses to this action should be submitted as per the options cited below: The United States Patent and Trademark Office requires most patent related correspondence to be: a) faxed to the Central Fax number (571-273-8300) b) hand carried or delivered to the Customer Service Window (located at the Randolph Building, 401 Dulany Street, Alexandria, VA 22314), c) mailed to the mailing address set forth in 37 CFR 1 . 1 (e.g., P.O. Box 1450, Alexandria, VA 22313-1450), or d) transmitted to the Office using the Office's Electronic Filing System.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Namitha Pillai whose telephone number is (571) 272-4054. The examiner can normally be reached on 8:30 AM - 5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Cabeca can be reached on (571) 272-4048.

All Internet e-mail communications will be made of record in the application file. PTO employees do not engage in Internet communications where there exists a possibility that sensitive information could be identified or exchanged unless the record includes a properly signed express waiver of the confidentiality requirements of 35 U.S.C. 122. This is more clearly set forth in the Interim Internet Usage Policy published in the Official Gazette of the Patent and Trademark on February 25, 1997 at 1195 OG 89.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (571) 272-2100.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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Art Unit 2173
February 6, 2006

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